

WORK PLAN REVISION
REVISED FOR PRELIMINARY DESIGN SCOPE, BUDGET, AND SCHEDULE

Based on the interpretation of the new requirements of the 1986 amendments to CERCLA the objectives of the preliminary design have expanded significantly. The intent of a preliminary design is that it should be complete enough such that a budget estimate can be developed in the range of +30 -15. This necessarily includes borings for foundations or collection systems, pump tests, topographic mapping for plan sheets and bench- and pilot-scale tests of treatment systems.

The following revised task descriptions amend the existing scope of work.

TASK QS--QUALITY ASSURANCE PROJECT PLAN

The additional sampling required to characterize the potential influent to the treatment plant must be completed to write the scope of work for bench-scale and pilot testing of the treatment system. Analysis of leachate and groundwater samples is required not only for CLP standard organic and inorganic packages but also for nutrient parameters which will help in defining treatment needs. A QAPP for this sampling effort is needed to define objectives and sampling and analytic reporting requirements.

TASK FM--SITE TOPOGRAPHIC MAP AND PRELIMINARY LAYOUTS

Since NSL has been actively accepting and disposing of wastes since 1983, a revised topographic map of the site including ECC, potential borrow areas north of the landfill, and unnamed ditch and Finley Creek needs to be prepared. This information is needed for plan sheets for the cap, leachate and groundwater collection system, rerouting of the ditch and creek and treatment plant location.

The specific requirements for this effort are:

- o Aerial photography will be obtained from an altitude to enable mapping of the landfill area at 1" = 50' for use in the predesign activities. Specifications for obtaining the aerial photography, surveying, and mapping services will be prepared.
- o Ground surveys shall be performed to obtain ground control for photogrammetric mapping purposes and to obtain additional ground information needed for the preliminary design phase of the project.

The surveyors shall place panels (aerial targets) at preselected locations on and around the site

prior to the aerial flight for control purposes. An inspection will take place within 1 hour prior to the flight to verify the existence of the control panels.

- o Prepare photogrammetric mapping of approximately 200 acres at a scale of 1" = 50' with a 1-foot contour interval. The mapping will contain all planimetric and topographic features within the selected site boundaries.

The photogrammetric mapping will be drafted by using scribing techniques and produce final design sheets with mapping onto standard 22" x 34" sheets containing appropriate title block information.

TASK FT--FIELDWORK SOURCE TESTING/INFLUENT CHARACTERIZATION

The objective of this task is to characterize the potential quality and strengths of the influent to the treatment system, to estimate treatment requirements and scope bench and or pilot scale treatment test.

- o Influent Characteristics
 - Five samples will be taken from each of the following: leachate tanks No. 1, No. 2, No.3; monitoring wells NSL 12, NSL 10S, NSL 14, NSL 8SA, NSL 9S.
 - The samples will be analyzed for CLP RAS acids base/neutrals, volatiles and metals.
 - The samples will also be analyzed for BOD₅, COD, TOC, chlorides, alkalinity, TDS, TSS, oil and grease, TOX, TKN, Total P, NO₃, NO₄, NH₃, SO₄, pH, conductivity.

TASK FQ--GEOTECHNICAL

The depths and alignment of the groundwater interception trench and leachate collection system (french drains), and the characterization of the borrow area, and needed structures for the recommended alternative have only been evaluated as to their feasibility. Subsurface data is required to specifically define soil conditions related to the stability of the floors and walls of trench excavation, characteristics of the anticipated borrow areas to be used for fill and or capping and structural requirements of buildings. The characteristics of the water bearing units to be intercepted need to be better defined relative to potential yield and drawdown, which will be accomplished by pump tests. The specific requirements of these tasks will

be provided after the selected remedy is agreed upon and a detailed scope of work prepared.

TASK PT--BENCH-SCALE PILOT PLANT TESTING

The bench-scale testing is needed to evaluate effectiveness of the proposed or other treatment process, and flocculation and clarification requirements.

The pilot plant testing will consist of unit processes necessary to determine the effectiveness of and possible performance of a proposed treatment systems. A detailed scope of work for this effort will be prepared after the influent characterization is completed.

TASK WP--WORK PLAN

This task is to be used to refine the work plan for the geo-technical, pump test, and pilot test tasks once the topographic mapping and influent characterization tasks are completed.

TASK QC--INTERNAL QUALITY CONTROL REVIEW

Periodic review of project files and project deliverables will be conducted by a review team selected to maintain quality control throughout the project. Also, ongoing consultation between the project team and the review team will occur as needed. The team will consist of three professionals with experience from appropriate disciplines related to the project.

TASK PM--PROJECT MANAGEMENT

Project management during the project will include the following:

- o Work with U.S. EPA to plan the project including scope definition, budgeting, and scheduling.
- o Keep U.S. EPA informed of project status.
- o Budgeting and schedule control.
- o Maintain project quality control and assurance programs.
- o Prepare monthly progress reports, activity completion reports, and technical and financial status reports.

TASK R7--PRELIMINARY DESIGN REPORT

The objective of this task is to prepare a report describing the engineering parameters and provide pertinent project information for transferring the project to the design party.

The draft report summarizing the predesign data will be prepared and submitted to the U.S. EPA and state. Following receipt of written comments on the draft, the report will be finalized. Approximately 30 copies will be provided to the U.S. EPA and state for distribution to appropriate personnel.

Project Team

Table 1 presents the dates for the deliverables of the preliminary design. Figure 1 represents the organization chart of the personnel anticipated to work on the NSL/ECC CAA Preliminary Design.

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Table 1
DELIVERABLE REVISION
PRELIMINARY DESIGN

<u>Deliverables</u>	<u>Date</u>
Responsiveness Summary	04/30/87
Draft Preliminary Design	02/15/88
Final Preliminary Design	03/15/88

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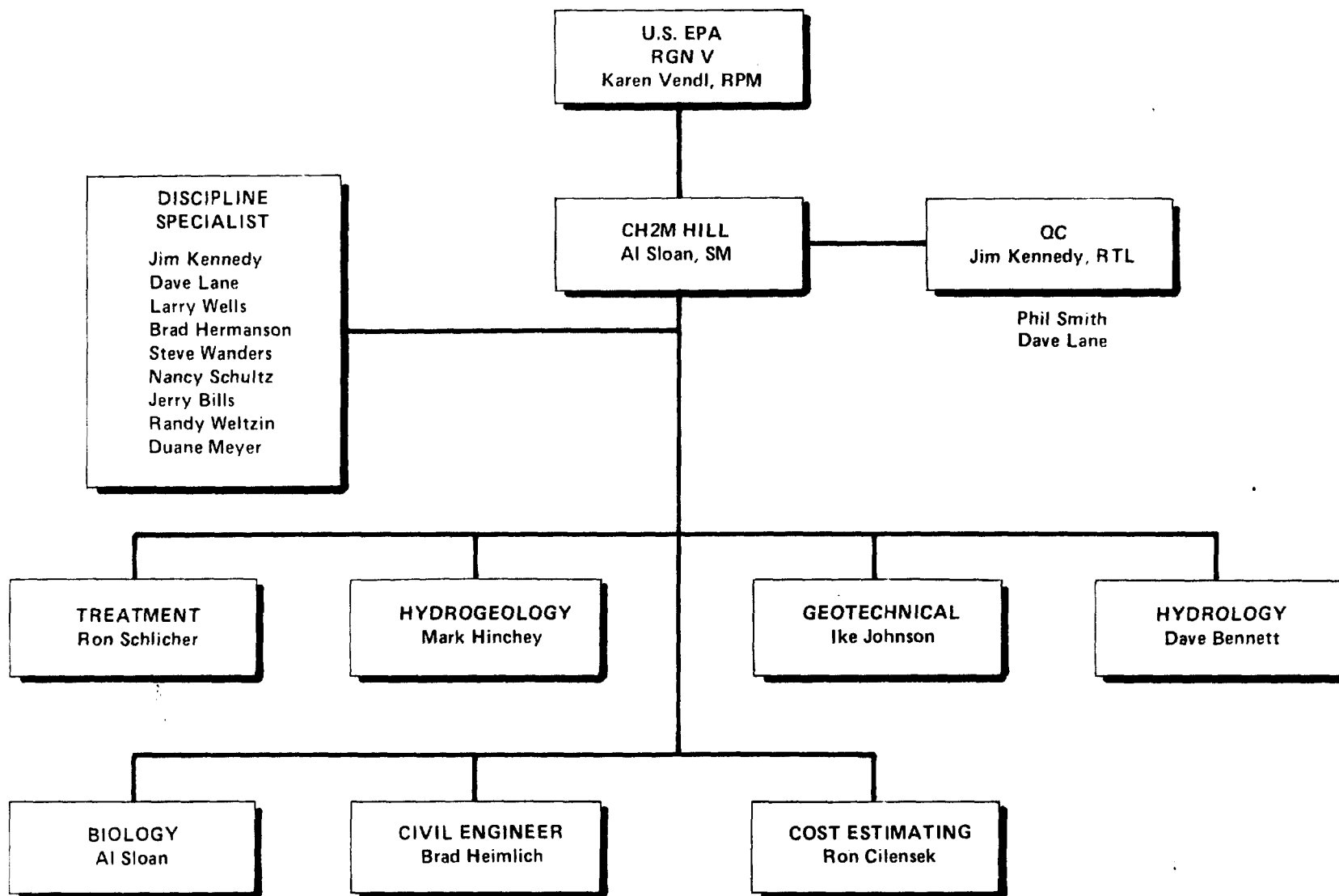


FIGURE
PRELIMINARY DESIGN
ORGANIZATION CHART
NSL/ECC WPRR

NSL/ECC CAA PREDESIGN/DESIGN SCHEDULE

ESTIMATED COST	ACTIVITIES	CIVIL/EARTHWORK	TREATMENT PLANT
	WORK PLAN	FEBRUARY 9, 1987	FEBRUARY 9, 1987
	REVISED LOE/BUDGET	MARCH 9, 1987	MARCH 9, 1987
	DAPP APPROVED		MARCH 30, 1987
\$10,000	TOPOGRAPHIC MAPPING	APRIL 6, 1987	
\$60,000	INFLUENT SAMPLING		MAY 4, 1987
\$100,000	TEST BORINGS/PUMP TESTS		
	BID	APRIL 6, 1987	
	CONTRACT	MAY 18, 1987	
	MOBILIZATION/TESTING	JUNE 1, 1987	
	RECIEVE SAMPLING INFORMATION		JUNE 1, 1987
\$250,000	PILOT PLANT		
	BID		JUNE 29, 1987
	CONTRACT		JULY 29, 1987
	MOBILIZATION/TESTING		AUGUST 31 -OCTOBER 30, 1987
	PREPARE DRAFT REPORT	JULY 31 -OCTOBER 30, 1987	NOVEMBER 2 -JANUARY 25, 1988
	QC REVIEW	OCTOBER 30, 1987	JANUARY 25, 1988
	INCORPORATE QC	NOVEMBER 13, 1987	FEBRUARY 8, 1988
	SUBMIT 1st DRAFT	NOVEMBER 23, 1987	FEBRUARY 15, 1988
	INCORPORATE AGENCY	DECEMBER 7, 1987	FEBRUARY 29, 1988
	FINAL REPORT	DECEMBER 14, 1987	MARCH 14, 1988
\$550,000	DESIGN		
	BEGIN DESIGN	DECEMBER 14, 1987	APRIL 4, 1988
	FINAL DESIGN	MARCH 28, 1988	SEPTEMBER 30, 1988

\$970,000	TOTAL		